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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/435,354	11/08/1999	NEIL HARRIS	085874/0193	5141

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EXAMINER

NI, SUHAN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/435,354

Applicant(s)

HARRIS ET AL.

Examiner

Suhan Ni

Art Unit

2643

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 and 17-28 is/are rejected.
7) ☒ Claim(s) 2-16 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the applicant's response filed 12/06/2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 17-28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hathaway et al. (U. S. Pat. - 5,394,478) in view of Kawachi (U. S. Pat. - 4,811,406).

Regarding claim 1, Hathaway et al. disclose a loudspeaker (Fig. 5) comprising a diffused sound source (4); and a wave guide (2) coupled to the sound source to direct acoustic energy from the sound source, wherein the wave guide includes a section of substantially uniform cross-section extending from and beyond the vicinity of the sound source, and a termination positioned remotely from the sound source as claimed. But Hathaway et al. do not clearly teach a phase unrelated diffuse sound source as claimed. Since Kawachi discloses a speaker system comprising a phase unrelated diffuse sound source (Fig. 3), it therefore would have been obvious to one skilled in the art at the time the invention was made to provide the phase unrelated diffuse sound source taught by Kawachi for the loudspeaker as an alternate choice, in order to enrich the acoustic characteristics of the loudspeaker.

Regarding claims 17, 20 and 26-28, Hathaway et al. further disclose the loudspeaker, wherein an acoustic reflector (1) is coupled to the duct as claimed (Fig. 5).

Regarding claims 18-19 and 22, neither Hathaway et al. nor Kawachi clearly teach a horn or folded duct as claimed. Since providing a horn or a folded duct for a waveguide is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a suitable horn and/or a folded duct for the waveguide of the loudspeaker, in order to desirably deliver the sound generated by the loudspeaker.

Regarding claims 21 and 24-25, neither Hathaway et al. nor Kawachi clearly teach a plurality of terminations of the waveguide as claimed. Since partitioning a waveguide into more than one pathway or terminations is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide properly partitioning of the waveguide of the loudspeaker, in order to obtain certain acoustic characteristics.

Regarding claim 23, neither Hathaway et al. nor Kawachi clearly teach an attenuator as claimed. Since Provide a desirable attenuator for a loudspeaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a suitable attenuator, such as a grille for loudspeaker, in order to make the loudspeaker more durable.

Allowable Subject Matter

3. Claims 2-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

4. Applicant's arguments dated 12/06/2004 have been fully considered, but they are not deemed to be persuasive.

The cited primary reference (U. S. Pat. - 5,394,478) does clearly show a conventional speaker/sound source (4), and a duct/tube/waveguide (2) coupled to the sound source as claimed.

The cited secondary reference (U. S. Pat. - 4,811,406) does clearly show a phase uncorrelated diffuse sound source (1) having certain desirable acoustic characteristics, in comparison to the conventional speaker, such as more output power and wider range frequency response, and so on.

Therefore, in order to increase the acoustic output and provide more enriched acoustic output, it would have been obvious to one skilled in the art at the time the invention was made to provide the speaker/sound source taught by Kawachi for the loudspeaker of Hathaway et al. as an alternate choice, or possible solution.

Regarding claim 1, the applicants argue no motivation to combine the references. It is not necessary that the references actually suggest, expressly or in so many words the changes or improvements that applicants have made. The test for combining references is what the references as whole would have suggested to one of ordinary skilled in the art. **In re Sheckler, 168 USPQ 716 (CCPA 1971); In re Mlaughlin 170 USPQ 209 (CCPA 1971); In re Young 159 USPQ 715 (CCPA 1968).**

As to the combination of Hathaway et al. and Kawachi has failed to teach applicants' claimed invention, but the Examiner respectfully disagrees. The combination of these references teaches the recited claim limitations.

Conclusion

5. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

6. Any response to this final action should be mailed to:

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

Or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE"), or

(703) 305-9508, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

**Receptionist, Sixth Floor,
Crystal Park II,
2121 Crystal Drive,
Arlington, Virginia 22202**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(571)-273-7505**. The examiner can normally be reached on Monday

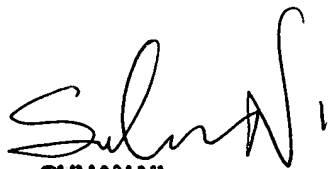
Art Unit: 2643

through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(571)-272-7499**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.

June 6, 2005


SUHAN NI
PRIMARY EXAMINER